

CLAIMS

I Claim:

1. A method for inserting a drainage tube into a colon, comprising the steps of:

5 inserting a guidewire into the colon through the anus and rectum;
pushing and manipulating the guidewire forward through the colon to the cecum;
passing a filament through the colon wall and into engagement with the
guidewire;

10 withdrawing the guidewire from the colon and out of the anus to thereby draw the
filament through the colon and out of the anus;

attaching a drainage tube having apertures therein to the filament;
drawing the filament with attached drainage tube back through the anus into the
colon until the drainage tube extends substantially entirely through the colon; and
fixing the drainage tube in place.

15 2. The method of claim 1, wherein the step of passing the filament through
the colon wall and into engagement with the guidewire comprises the steps of forming
the guidewire with a through channel and passing the filament through the channel of the
guidewire.

20 3. The method of claim 2, wherein the step of passing the filament through
the colon wall and into engagement with the guidewire further comprises the steps of
forming the channel in a bulbous enlargement of the guidewire to thereby provide the

bulbous enlargement with at least one flat side, and passing a needle with threaded filament through the colon wall and through the channel.

4. The method of claim 1, further comprising the step of locating a bulbous enlargement of the guidewire in the cecum, the filament being passed through the colon wall and into engagement with the bulbous enlargement.

5. The method of claim 1, wherein the step of attaching the filament to the drainage tube comprises the steps of passing the filament through a tip of the drainage tube and tying it around a wall of the drainage tube .

6. The method of claim 1, wherein the step of attaching the filament to the drainage tube comprises the steps of passing the filament through a tip of the drainage tube and out a side hole thereof and then tying the filament to a filament button, and pulling on the filament so that the filament button returns to the interior of the drainage tube and abuts against the inner surface of the tip of the drainage tube, the filament button being dimensioned such that it is unable to pass back out through the tip of the drainage tube thereby securing the filament to the drainage tube.

7. The method of claim 1, wherein the step of fixing the drainage tube in place comprises the steps of cutting the filament to leave a portion connected to the drainage tube, passing this portion of the filament through the abdominal wall and fixing this portion of the filament to the patient's skin.

8. The method of claim 1, wherein the step of fixing the drainage tube in place comprises the steps of passing this portion of the filament through the abdominal wall, winding the filament outside of the abdominal cavity onto a spool and fixing the spool on the abdominal surface.

5 9. The method of claim 1, wherein the step of fixing the drainage tube in place comprises the step of passing a forward extension portion of the drainage tube through colon wall and the abdominal wall and securing the drainage tube to the patient's skin.

10 10. The method of claim 9, wherein the drainage tube is secured to the patient's skin with suture, tape or a collar.

15 11. The method of claim 1, further comprising the step of clamping a first end of the filament while a second end of the filament is free, the filament being engaged with the guidewire between the first and second ends such that as the guidewire is withdrawn from the colon and out of the anus, the second end of the filament is drawn through the colon and out of the anus, the drainage tube being attached in the vicinity of the second end of the filament.

12. A method for draining and decompressing a colon, comprising the steps of:

inserting a drainage tube having apertures therein through the anus into the colon

to extend through substantially the entire colon such that a portion of the drainage tube is situated in the cecum;

fixing the drainage tube in place; and

applying suction from one end of the drainage tube to cause fecal matter to pass
5 through the apertures into the drainage tube and be withdrawn from the colon.

13. The method of claim 12, wherein suction is applied intermittently from one end of the drainage tube.

14. The method of claim 12, wherein suction is applied from a rearward end of the drainage tube proximate the anus.

10 15. The method of claim 12, further comprising the steps of:
forming the drainage tube with an forward extension portion defining an air
inflow channel at a forward end of the drainage tube proximate the cecum;
extending the forward extension portion through the abdominal wall such that the
air inflow channel opens to the ambient atmosphere; and
15 coupling a rearward extension portion of the drainage tube proximate the anus to
a suction device to enable continuous suction to be applied through the drainage tube,
the drainage tube being fixed by fixing the forward extension portion in place.

16. The method of claim 12, further comprising the steps of:
forming the drainage tube with a main part having an effluent passage and an air

passage alongside the effluent passage and opening to the effluent passage at one end of the main part, the apertures being formed in the effluent passage, the air passage being coupled to the ambient atmosphere; and

coupling the effluent passage to a suction device at the end of the tube opposite to where the air passage communicates with the effluent passage to enable continuous suction to be applied through the drainage tube.

17. The method of claim 16, wherein the air passage opens to the effluent passage at a forward end of the drainage tube proximate the cecum, further comprising the steps of:

coupling the air passage to an air inflow channel in a rearward extension portion of the drainage tube, the air inflow channel opening to the ambient atmosphere;

coupling the effluent passage to an effluent channel in the rearward extension portion; and

coupling the effluent channel to the suction device.

18. The method of claim 16, further comprising the steps of:

passing a forward extension portion of the drainage tube through the abdominal wall, the air passage opening to the effluent passage at a rearward end of the drainage tube proximate the anus;

coupling the air passage to an air inflow channel in the forward extension portion of the drainage tube, the air inflow channel opening to the ambient atmosphere; and

coupling the effluent passage to an effluent channel in the forward extension

portion; and

coupling the effluent channel to the suction device,

the drainage tube being fixed by fixing the forward extension portion in place.

19. The method of claim 12, further comprising the steps of:

5 forming the drainage tube with an rearward extension portion defining an air
inflow channel at a rearward end of the drainage tube proximate the anus;

maintaining the air inflow channel in communication with the ambient
atmosphere;

10 extending a forward extension portion of the drainage tube through the abdominal
wall; and

coupling the forward extension portion of the drainage tube to a suction device to
enable continuous suction to be applied through the drainage tube.

20. The method of claim 19, wherein the rearward extension portion has a
smaller cross-sectional area than a main part of the drainage tube situated in the colon.

15 21. The method of claim 12, further comprising the steps of:

passing a forward extension portion of the drainage tube through the abdominal
wall;

forming the drainage tube with a closed rearward end;

positioning the drainage tube such that the rearward end is inside the patient; and

20 coupling the forward extension portion of the drainage tube to a suction device,

the drainage tube being fixed by fixing the forward extension portion in place.

22. The method of claim 21, further comprising the steps of:

attaching a filament to the rearward end of the drainage tube such that the filament extends out the anus; and

5 withdrawing the drainage tube when desired by pulling on the filament to cause the attached drainage tube to be withdrawn from the colon.

23. The method of claim 12, wherein the step of inserting a drainage tube through the anus into the colon comprises the steps of:

inserting a guidewire into the colon through the anus and rectum;

10 pushing and manipulating the guidewire forward through the colon to the cecum;

passing a filament through the colon wall and into engagement with the guidewire;

withdrawing the guidewire from the colon and out of the anus to thereby draw the filament through the colon and out of the anus;

15 attaching the drainage tube having apertures therein to the filament; and

drawing the filament with attached drainage tube back through the anus into the colon.

24. The method of claim 12, wherein the step of fixing the drainage tube in place comprises the steps of attaching a filament to a forward end of the drainage tube, passing the filament through the colon wall and the abdominal wall and fixing the

filament to the patient's skin.

25. The method of claim 12, wherein the step of fixing the drainage tube in the colon comprises the steps of attaching a filament to a forward end of the drainage tube, passing the filament through the colon wall and the abdominal wall, winding the filament outside of the abdominal cavity onto a spool and fixing the spool on the abdominal surface.

26. The method of claim 12, further comprising the step of passing a forward extension portion of the drainage tube through the abdominal wall, the step of fixing the drainage tube in place comprising the step of securing the forward extension portion of the drainage tube to the patient's skin.

27. The method of claim 26, wherein the drainage tube is secured to the patient's skin with suture, tape or a collar.

28. A guidewire comprising:
an elongate, resilient shaft; and
a bulbous enlargement arranged at a distal end of said shaft, said bulbous enlargement having a smooth, arcuate outer surface and including engagement means for enabling engagement of a filament thereto.

29. The guidewire of claim 28, wherein said engagement means comprise a

channel extending through said bulbous enlargement to thereby provide said bulbous enlargement with opposed flat sides.

30. The guidewire of claim 29, wherein said channel has an axis perpendicular to an axis of said shaft.

5 31. The guidewire of claim 28, wherein said bulbous enlargement is substantially spherical.

32. The guidewire of claim 28, wherein said bulbous enlargement has a diameter of about 0.25 inches to about 0.75 inches.

10 33. The guidewire of claim 28, wherein said shaft is formed such that a portion of said shaft attached to said bulbous enlargement is more flexible than the remainder of said shaft.

34. The guidewire of claim 28, wherein said shaft is tapered such that an end attached to said bulbous enlargement has a smaller cross-section than an end distant from said bulbous enlargement.

15 35. The guidewire of claim 28, wherein said shaft comprises a central metal wire and a coil surrounding said central metal wire.

36. A drainage tube for use in draining and decompressing a colon,
comprising:

a flexible main part defining an interior lumen and a plurality of apertures leading
from an outer surface to an inner surface of said main part and communicating with said
5 lumen, said main part having a forward end adapted to be inserted first into the colon and
a rearward end,

one of the forward or rearward end of said main part being connectable to a
suction source to enable suction to be applied into said lumen by the suction source,

said main part being fixable in position in the colon to prevent withdrawal of said
10 main part from the colon.

37. The drainage tube of claim 36, further comprising a rearward extension
portion coupled to the rearward end of said main part and including a suction channel in
flow communication with said lumen of said main part, said suction channel being
connectable to the suction source.

15 38. The drainage tube of claim 37, further comprising an forward extension
portion arranged at the forward end of said main part and defining an air inflow channel,
said air inflow channel leading into said lumen and being couplable to the ambient
atmosphere.

39. The drainage tube of claim 38, wherein said forward extension portion has
20 a smaller cross-sectional area than a cross-sectional area of said main part.

40. The drainage tube of claim 36, wherein said lumen is an effluent passage, said main part further including an additional lumen defining an air passage alongside said effluent passage, said air passage and said effluent passage being in communication with one another only at the forward end of said main part, said effluent passage being couplable to the suction source and said air passage being couplable to the ambient atmosphere.

41. The drainage tube of claim 36, further comprising a forward extension portion coupled to the forward end of said main part and including a suction channel in flow communication with said lumen of said main part, said suction channel being connectable to the suction source.

42. The drainage tube of claim 41, further comprising an rearward extension portion arranged at the rearward end of said main part and defining an air inflow channel leading into said lumen and couplable to the ambient atmosphere.

43. The drainage tube of claim 42, wherein said rearward extension portion has a smaller cross-sectional area than a cross-sectional area of said main part.

44. The drainage tube of claim 36, wherein said main part has a closed rearward end, further comprising a filament attached to the rearward end of said main part.

45. The drainage tube of claim 36, wherein said lumen is an effluent passage, said main part further including an additional lumen defining an air passage alongside said effluent passage, said air passage and said effluent passage being in communication with one another only at the rearward end of said main part, said effluent passage being couplable to the suction source and said air passage being couplable to the ambient atmosphere.

46. The drainage tube of claim 36, further comprising a bulbous ring or bulbous expansion arranged at the forward end of said main part and having a channel in which a portion of the drainage tube is situated.